

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P883801

Luminaire Tested: **NAV-SB4B-760-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883801
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-760-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 5700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24317 lumens
Efficiency: N/A
Efficacy: 165.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

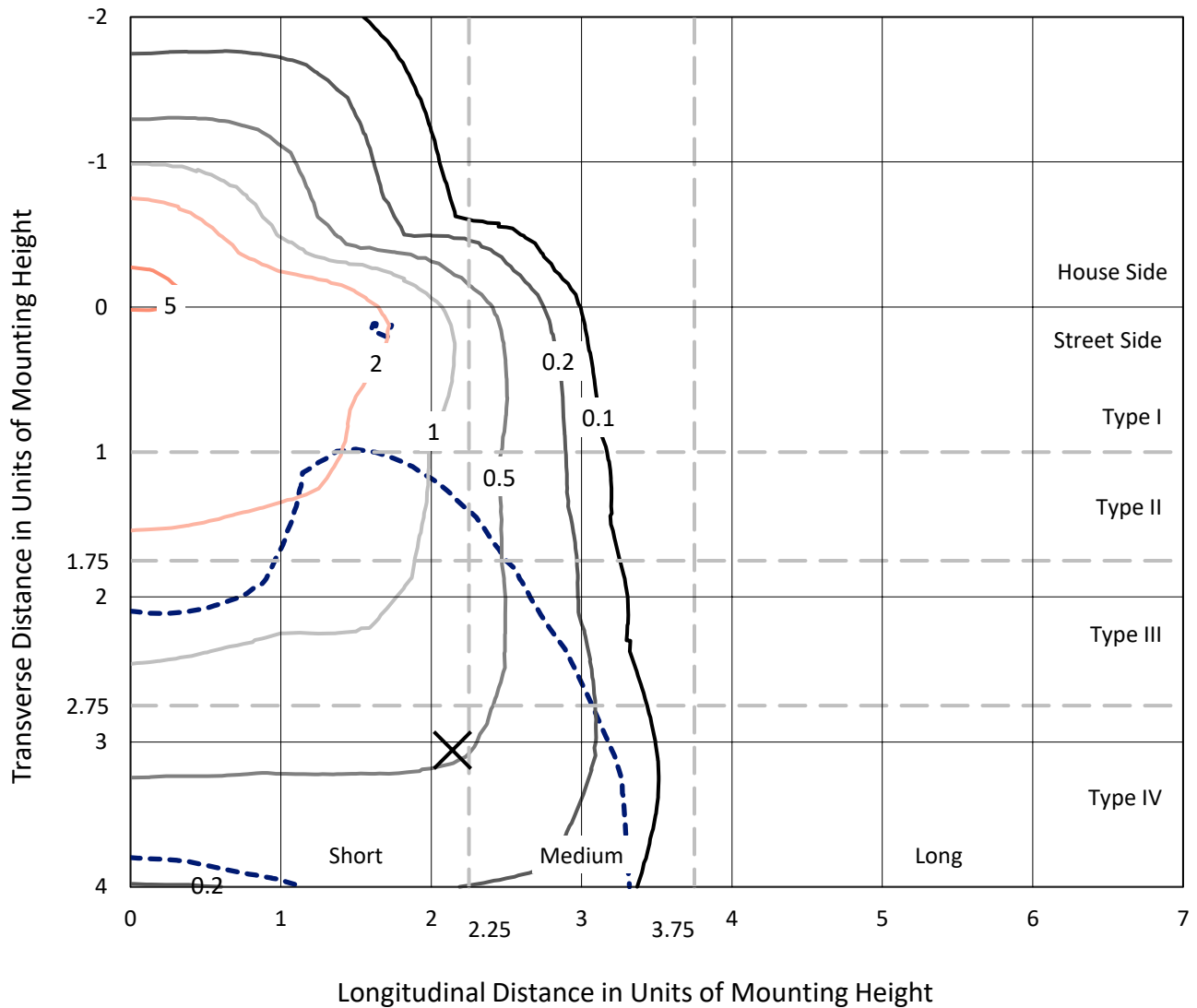
Input Watts (W): 147
Input Voltage (V): 120.0
Input Current (Ain): 1.255
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

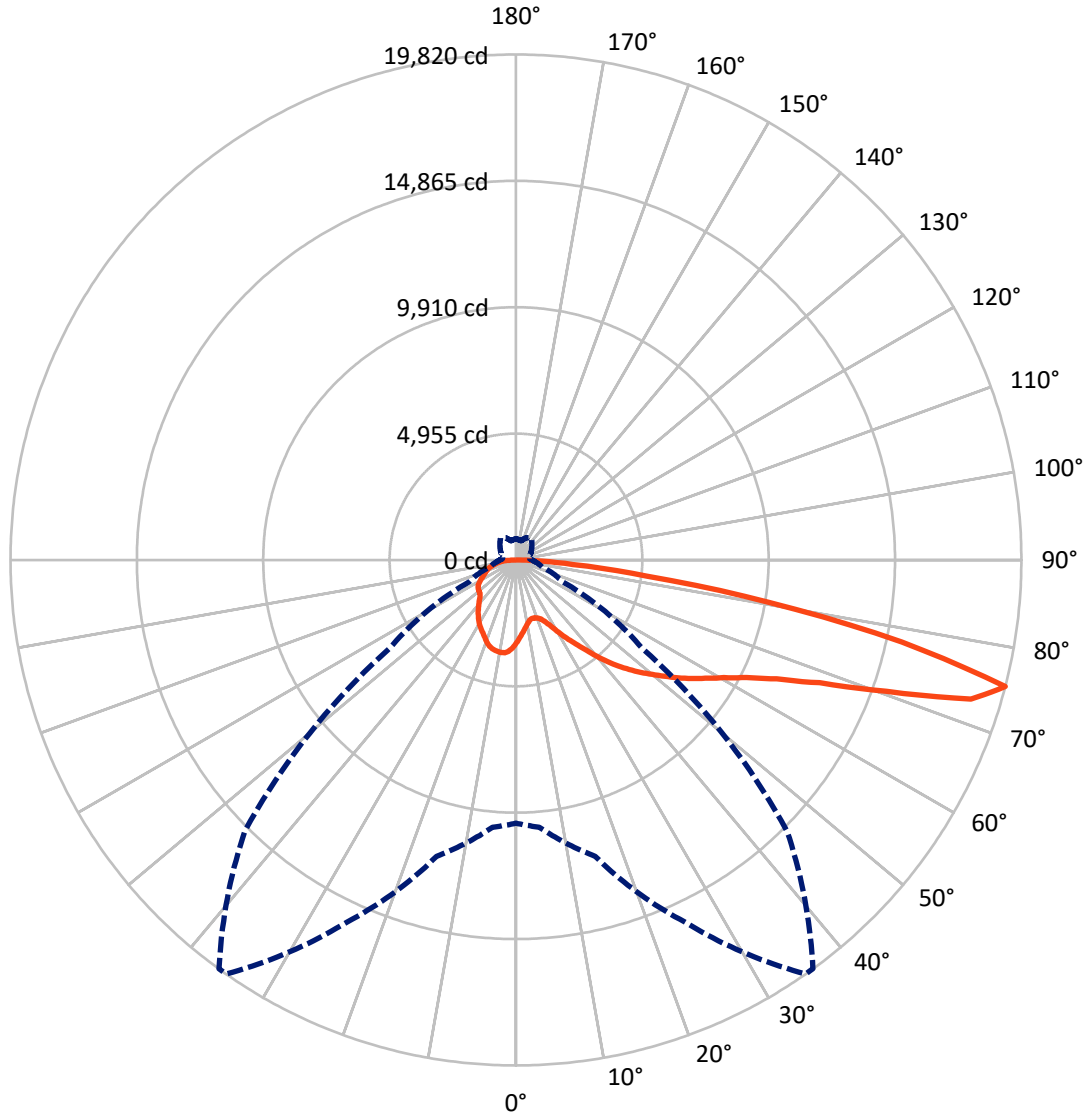
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5786.8	0.0	5786.8
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	18530.2	0.0	18530.2
	% Fixture	76.2	0.0	76.2
Total	Lumens	24317.0	0.0	24317.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.8	1.3
10°-20°	884.9	3.6
20°-30°	1486.1	6.1
30°-40°	2309.5	9.5
40°-50°	3428.0	14.1
50°-60°	4732.5	19.5
60°-70°	5741.6	23.6
70°-80°	4745.0	19.5
80°-90°	682.5	2.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	24317.0	100.0
0°-180°	24317.0	100.0

Coefficient of Utilization



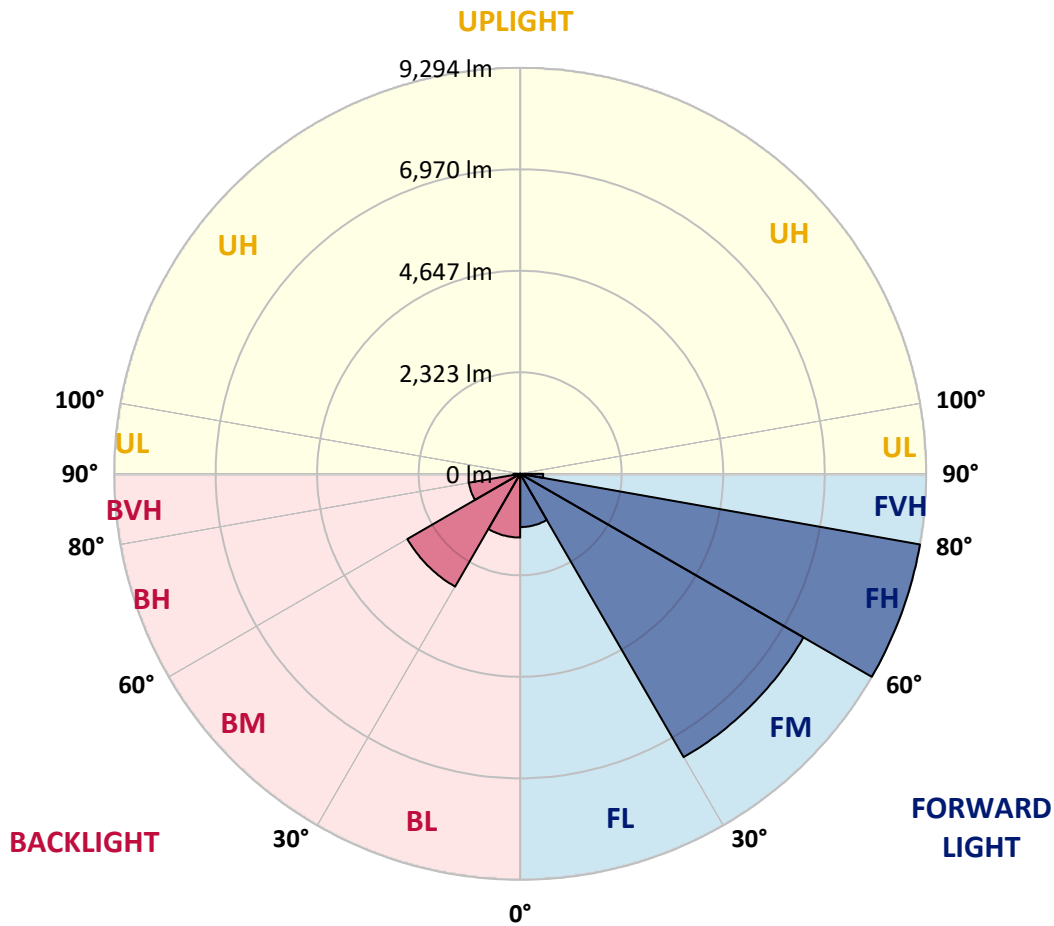
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1219.5	5.0			
FM (30°-60°)	7488.3	30.8			
FH (60°-80°)	9293.6	38.2			G4/12000
FVH (80°-90°)	528.8	2.2			G4/750
BL (0°-30°)	1458.4	6.0	B3/2500		
BM (30°-60°)	2981.7	12.3	B3/5000		
BH (60°-80°)	1193.1	4.9	B3/2500		G3/2500
BVH (80°-90°)	153.7	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4
2.5°	2988.0	3006.4	3014.3	3010.4	3030.1	3027.4	3055.1	3089.2	3136.6	3182.6	3249.6
5°	2758.0	2777.7	2794.8	2810.5	2848.7	2860.5	2903.9	2969.6	3056.4	3144.4	3254.9
7.5°	2543.7	2560.8	2587.1	2616.0	2680.4	2692.2	2764.5	2867.1	2988.0	3116.8	3269.3
10°	2368.8	2385.9	2413.5	2446.4	2526.6	2541.1	2633.1	2769.8	2927.5	3090.5	3285.1
12.5°	2293.9	2299.2	2315.0	2347.8	2417.5	2426.7	2527.9	2684.3	2868.4	3070.8	3308.8
15°	2290.0	2300.5	2301.8	2318.9	2376.7	2380.7	2474.0	2629.1	2831.6	3066.9	3344.3
17.5°	2329.4	2337.3	2325.5	2336.0	2384.6	2391.2	2464.8	2602.8	2819.7	3084.0	3404.7
20°	2434.6	2441.1	2405.7	2391.2	2426.7	2431.9	2504.2	2619.9	2831.6	3119.5	3487.5
22.5°	2658.1	2662.0	2575.2	2516.1	2518.7	2521.3	2584.4	2689.6	2877.6	3183.9	3592.7
25°	3006.4	3003.8	2865.8	2751.4	2685.7	2671.2	2713.3	2802.7	2955.1	3269.3	3728.1
27.5°	3413.9	3394.2	3256.2	3085.3	2942.0	2921.0	2911.8	2949.9	3065.6	3382.4	3893.7
30°	3874.0	3855.6	3707.1	3483.6	3285.1	3250.9	3164.2	3144.4	3229.9	3536.2	4123.8
32.5°	4378.8	4367.0	4189.5	3918.7	3653.2	3613.7	3467.8	3415.2	3482.3	3768.9	4444.5
35°	4802.1	4791.6	4644.4	4365.7	4041.0	3992.3	3843.8	3784.6	3818.8	4067.3	4863.9
37.5°	5184.6	5179.4	5053.2	4833.7	4498.4	4439.3	4272.3	4252.6	4246.0	4460.3	5372.6
40°	5539.6	5526.4	5395.0	5279.3	5030.8	4976.9	4829.7	4812.6	4762.7	4944.1	5948.4
42.5°	5932.6	5898.5	5707.8	5653.9	5586.9	5542.2	5454.1	5456.8	5346.3	5489.6	6558.4
45°	6253.4	6233.7	6037.8	6006.3	6078.6	6060.1	6136.4	6156.1	5941.8	6061.5	7192.0
47.5°	6597.8	6579.4	6413.8	6391.4	6587.3	6592.5	6862.0	6868.6	6522.9	6655.6	7826.9
50°	7022.4	6996.1	6831.8	6859.4	7078.9	7098.7	7591.6	7546.9	7057.9	7259.0	8456.6
52.5°	7302.4	7318.2	7282.7	7327.4	7627.1	7645.5	8309.4	8195.0	7587.7	7854.5	9074.4
55°	7508.8	7540.3	7650.8	7753.3	8205.5	8223.9	8986.4	8811.5	8026.7	8406.6	9655.5
57.5°	7774.3	7729.6	7936.0	8135.8	8755.0	8803.6	9645.0	9405.7	8415.9	8882.5	10053.8
60°	8155.6	8124.0	8284.4	8580.2	9370.2	9447.8	10341.7	9940.7	8701.1	9259.8	10131.4
62.5°	8928.5	8849.7	8874.6	9136.2	10145.8	10248.4	11127.8	10407.4	8843.1	9407.0	9716.0
65°	10084.0	9948.6	9822.4	10003.8	11238.2	11339.4	12015.1	10774.2	8790.5	9121.8	8613.0
67.5°	11539.3	11405.2	11250.1	11420.9	12847.3	12927.4	13110.2	10980.6	8376.4	8022.8	6663.5
70°	12739.5	12689.5	12874.9	13578.2	15417.2	15419.9	14514.1	10809.7	7241.9	5688.1	3855.6
72.5°	12580.4	12550.2	13526.9	15701.2	18656.3	18586.6	15843.1	9516.1	4878.4	2566.0	1444.7
75°	10320.7	10516.5	12029.6	15663.1	19819.7	19810.5	15029.4	6049.6	2017.9	1063.5	746.7
77.5°	5534.3	5844.6	7809.8	11564.2	15472.4	15705.1	10566.5	2116.5	866.3	680.9	516.6
80°	1804.9	2075.7	3112.9	5887.9	10053.8	10010.4	4528.7	830.8	592.9	482.4	357.6
82.5°	766.4	797.9	1390.8	2780.3	5159.7	5079.5	1442.1	477.2	416.7	330.0	220.8
85°	299.7	335.2	613.9	1285.6	2234.8	2186.1	520.6	236.6	266.9	215.6	131.5
87.5°	98.6	119.6	219.5	440.4	695.4	670.4	127.5	81.5	115.7	98.6	47.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4	3240.4
2.5°	3268.0	3289.0	3314.0	3350.8	3382.4	3408.7	3436.3	3453.4	3459.9	3479.7	3478.3
5°	3291.7	3337.7	3399.5	3459.9	3519.1	3554.6	3586.1	3601.9	3616.4	3626.9	3629.5
7.5°	3331.1	3390.3	3487.5	3566.4	3616.4	3645.3	3666.3	3661.1	3666.3	3669.0	3672.9
10°	3365.3	3448.1	3563.8	3638.7	3676.8	3678.2	3672.9	3654.5	3645.3	3646.6	3649.2
12.5°	3406.0	3498.1	3622.9	3686.0	3696.6	3667.6	3645.3	3613.7	3601.9	3596.7	3594.0
15°	3461.3	3566.4	3687.4	3711.0	3684.7	3647.9	3609.8	3558.5	3532.2	3511.2	3517.8
17.5°	3528.3	3644.0	3737.3	3720.2	3663.7	3603.2	3541.4	3463.9	3410.0	3387.6	3389.0
20°	3621.6	3725.5	3775.4	3700.5	3615.1	3523.0	3417.9	3323.2	3273.3	3250.9	3248.3
22.5°	3734.7	3834.6	3812.2	3666.3	3545.4	3398.2	3266.7	3197.0	3172.0	3156.3	3158.9
25°	3870.1	3955.5	3838.5	3616.4	3431.0	3232.5	3131.3	3108.9	3097.1	3085.3	3085.3
27.5°	4046.2	4092.2	3858.3	3542.8	3252.2	3056.4	3019.6	3023.5	3019.6	2999.8	3003.8
30°	4278.9	4269.7	3876.7	3423.1	3047.2	2897.3	2899.9	2917.0	2919.7	2906.5	2913.1
32.5°	4585.2	4491.9	3885.9	3268.0	2851.3	2758.0	2760.6	2779.0	2792.1	2769.8	2780.3
35°	4955.9	4750.8	3871.4	3073.5	2700.1	2625.2	2605.5	2610.7	2614.7	2593.6	2608.1
37.5°	5388.4	5041.4	3807.0	2857.9	2575.2	2495.0	2453.0	2417.5	2396.5	2376.7	2389.9
40°	5863.0	5358.2	3688.7	2647.5	2435.9	2357.0	2293.9	2226.9	2155.9	2129.6	2141.4
42.5°	6359.9	5684.2	3545.4	2446.4	2275.5	2211.1	2144.1	2046.8	1940.3	1886.4	1893.0
45°	6875.2	6018.1	3404.7	2247.9	2111.2	2083.6	2006.0	1889.0	1773.3	1705.0	1699.7
47.5°	7380.0	6333.6	3198.3	2048.1	1957.4	1987.6	1927.2	1819.4	1690.5	1582.7	1570.9
50°	7862.4	6629.4	2860.5	1845.7	1832.5	1958.7	1900.9	1745.7	1598.5	1460.5	1448.7
52.5°	8340.9	6868.6	2428.0	1661.6	1765.5	1950.8	1866.7	1695.8	1515.7	1371.1	1355.3
55°	8747.1	6992.2	2011.3	1503.9	1668.2	1883.8	1825.9	1636.6	1398.7	1244.9	1231.7
57.5°	8978.5	6892.3	1664.2	1348.7	1534.1	1773.3	1756.3	1510.4	1259.4	1141.0	1125.3
60°	8878.6	6487.4	1380.3	1213.3	1406.6	1653.7	1635.3	1385.6	1152.9	1041.1	1025.4
62.5°	8327.8	5715.7	1155.5	1095.0	1290.9	1531.5	1514.4	1289.6	1071.4	963.6	946.5
65°	7218.3	4649.6	980.7	996.4	1173.9	1384.2	1409.2	1209.4	1007.0	901.8	884.7
67.5°	5505.4	3367.9	844.0	911.0	1059.5	1239.6	1311.9	1151.6	953.1	853.2	837.4
70°	3137.9	1912.7	728.3	828.2	958.3	1105.5	1237.0	1105.5	895.2	812.4	801.9
72.5°	1189.7	878.1	629.7	745.4	861.0	992.5	1154.2	1033.2	828.2	766.4	755.9
75°	634.9	535.0	529.8	648.1	749.3	882.1	1050.3	962.3	778.2	809.8	836.1
77.5°	432.5	378.6	443.0	554.7	627.0	759.8	939.9	854.5	674.4	671.7	619.2
80°	299.7	268.2	360.2	447.0	485.1	638.9	820.3	733.5	549.5	512.7	490.3
82.5°	180.1	174.8	269.5	333.9	343.1	493.0	679.6	615.2	449.6	391.7	394.4
85°	98.6	103.9	172.2	195.9	199.8	344.4	532.4	475.9	345.7	290.5	293.1
87.5°	27.6	35.5	63.1	77.6	96.0	178.8	316.8	282.6	173.5	120.9	120.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)